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Combined Intimate Partner Violence and HIV/AIDS Prevention in Rural Uganda: Design of the SHARE Intervention Strategy

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Intimate partner violence (IPV) has a bidirectional relationship with HIV infection. Researchers from the Rakai Health Sciences Program (RHSP), an HIV research and services organization in rural Uganda, conducted a combination IPV and HIV prevention intervention called the Safe Homes and Respect for Everyone (SHARE) Project between 2005 and 2009. SHARE was associated with significant declines in physical and sexual IPV and overall HIV incidence, and its model could be adopted as a promising practice in other settings. In this article we describe how SHARE's IPV-prevention strategies were integrated into RHSP's existing HIV programming and provide recommendations for replication of the approach.

In 2004 the President's Emergency Plan for AIDS Relief (PEPFAR) announced that interventions to prevent gender-based violence (GBV) should be part of the global AIDS strategy (Office of the U.S. Global AIDS Coordinator, U.S. Department of State [OGAC], 2004). In 2006 PEPFAR more specifically recognized the role that intimate partner violence (IPV) plays in perpetuating women's risk for HIV (OGAC, 2006) and 5 years later, in 2011, the U.S. Agency for International Development (USAID) developed a guide for including GBV prevention into all PEPFAR programs (Khan, 2011). In 2012, UNAIDS added a GBV indicator to its core set of markers for tracking progress in the global HIV response (UNAIDS, 2011). Recognizing the importance of addressing IPV at the population level, the Centers for Disease Control and Prevention (CDC) and the World Health Organization's (WHO) Violence Prevention Alliance (VPA) developed a public health approach for its prevention. The model involves four steps: (a) define the problem; (b) identify risk and protective factors; (c) develop and test prevention strategies; and (d) assure widespread adoption (CDC, 2009; WHO, 2012).

In this article we explain how we used the four-step CDC/VPA approach to integrate an IPV prevention intervention, called the Safe Homes And Respect for Everyone (SHARE) Project (Wagman et al., 2012), into the existing HIV prevention, care, and treatment infrastructure of the Rakai Health Sciences Program (RHSP). The RHSP has conducted research on and provided services for HIV/AIDS and reproductive health in rural Uganda since 1988 (Wawer et al., 1998). Between 2005 and 2009, we conducted SHARE in four regions of the Rakai district. The intervention provided standard of care HIV and health services in addition to community-level mobilization to change attitudes, social norms, and behaviors related to IPV. We added IPV awareness and prevention messages into RHSP's existing HIV health education programs, and we engaged two key groups (adolescents and men) in combination IPV and HIV prevention. We also formed support groups for HIV-infected women at risk of IPV, a referral network to link individuals to HIV and IPV services, and we offered screening and brief interventions

to promote safe HIV disclosure and risk reduction in women seeking HIV counseling and testing services.

We previously published details about the design and implementation of SHARE's IPV prevention activities (Wagman et al., 2012). As emphasized by Hoffmann and colleagues (2014), however, interventions shown to be useful cannot be reliably replicated without a fully published description of the intervention. Our goal for this article is to improve the completeness of reported details about SHARE so others can replicate it or build on their own findings.

PATHWAYS BETWEEN IPV AND HIV INFECTION

Intimate partner violence (IPV) has a bidirectional relationship with HIV infection (Campbell et al., 2008; Campbell, Lucea, Stockman, & Draughon, 2013; Kouyoumdjian, Findlay, Schwandt, & Calzavara, 2013b; Maman et al., 2002; Maman, Campbell, Sweat, & Gielen, 2000). To understand the direct and indirect links between IPV and HIV infection we designed a conceptual framework (Figure 1) to illustrate their two-way relationship. Our framework borrows from and builds upon (with permission from the authors) the Jewkes, Dunkle, Nduna, and Shai (2010, p. 42) model illustrating pathways through which GBV, gender, and relationship power inequity might place women at risk of HIV.

Directly, forced sex/rape with an HIV-infected partner increases risk for transmission (Campbell et al., 2008; Maman et al., 2000). Indirectly, abused women often report risky sexual behaviors that possibly serve as coping mechanisms or learned behaviors associated with histories of abuse (Bensley, Van Eenwyk, & Wynkoop Simmons, 2003; Coid et al., 2001; Hotaling & Sugarman, 1986). Male perpetrators of IPV are more likely to practice higher risk sex than nonabusive men, be HIV infected, or both (Decker et al., 2009; Dunkle et al., 2006). Further, male controlling behaviors increase women's risk for HIV infection (Durevall & Lindskog, 2014). Last, in settings where violence against women (VAW) is justified, women often lack choices about how and when to have sex, and their ability to protect themselves is limited (Maman et al., 2000). Research also suggests that HIV-infected women are at heightened risk for IPV when they request, undergo, or disclose positive HIV results (Fonck, Leye, Kidula, Ndinya-Achola, & Temmerman, 2005; Maman et al., 2000; Maman et al., 2002). HIV-positive women experience more severe and frequent abuse when compared with HIV-negative women (Sareen, Pagura, & Grant, 2009) and prior IPV exposure has been significantly associated with HIV infection among women, even after adjusting for other risk factors (Dunkle et al., 2004; Fonck et al., 2005; Jewkes et al., 2010; Maman et al., 2002; Sareen et al., 2009). Finally, societal/structural factors and contextual determinants may increase risk for HIV and IPV by creating

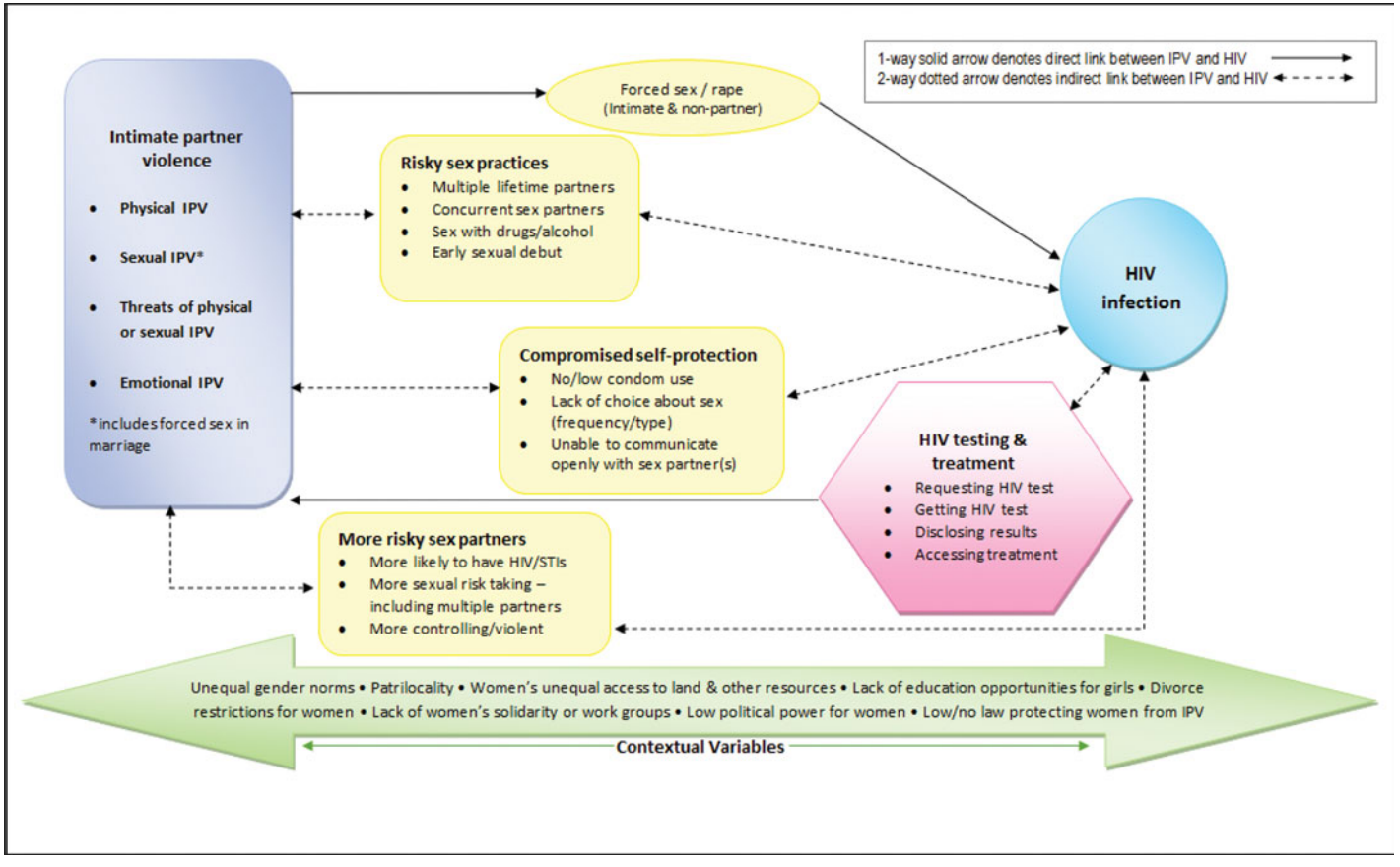

FIGURE 1 Conceptual framework: Pathways between intimate partner violence and HIV infection. (Adapted with permission from conceptual framework developed by Jewkes, Dunkle, Nduna, & Shai, 2010).

a climate in which one or both is likely to occur (Campbell, 1999; Dahlberg & Krug, 2002; Koenig, Stephenson, Ahmed, Jejeebhoy, & Campbell, 2006).

THE PUBLIC HEALTH APPROACH TO PREVENTING IPV AND HIV INFECTION

Public health interventions are community-focused, rooted in the scientific method, and aim to improve the safety and well-being of entire populations. In Rakai we followed the CDC/VPA model for violence prevention (CDC, 2009; WHO, VPA 2012) but modified it to address both HIV and IPV, by dividing Step 3 into two parts: 3A was to develop and pilot the SHARE violence prevention project; and 3B was to integrate SHARE into RHSP's existing HIV prevention activities. In Figure 2 we show the steps we chronologically followed and provide details on each.

UNDERSTANDING HIV AND IPV IN RAKAI, UGANDA (STEPS 1 AND 2)

Between 2000 and 2004, we reviewed findings on attitudes and beliefs pertaining to IPV; the prevalence of and associations between IPV and HIV/AIDS (Step 1); and risk and protective factors of IPV and HIV infection (Step 2). Our goals of this preintervention assessment were to understand the magnitude of IPV and HIV infection in Rakai, identify which pathways existed between them so as to focus on where we could intervene with prevention efforts, and establish if any specialized services were available. We derived all data/findings from the Rakai Community Cohort Study (RCCS), a well-established, population-based HIV surveillance cohort in Rakai district, Uganda, that has been described elsewhere (Grabowski et al., 2014; Wawer et al., 1998). Briefly, RCCS follows an open cohort of consenting 15–49-year-old male and female residents of the district. RCCS procedures include a census, interviews, and serological surveys every 12–18 months in approximately 50 communities, each of which is defined by the RCCS as an administrative unit whose boundaries are determined by the Local Councils 1 and 2, which are the two smallest political units of the Ugandan government (Grabowski et al., 2014). All communities were previously aggregated into 11 study regions (Wawer et al., 1998). We used key findings from our investigative review to inform the design of the SHARE combined IPV and HIV prevention intervention and have summarized them here.

In 2002, the pre-SHARE HIV prevalence in Rakai was 16% in women and 12% in men, with a population-based HIV incidence of 1.5/100 person–years (PY; Zablotska et al., 2006). Approximately 30% and 24% of adult women reported lifetime physical and sexual IPV, respectively (Koenig et al., 2003;

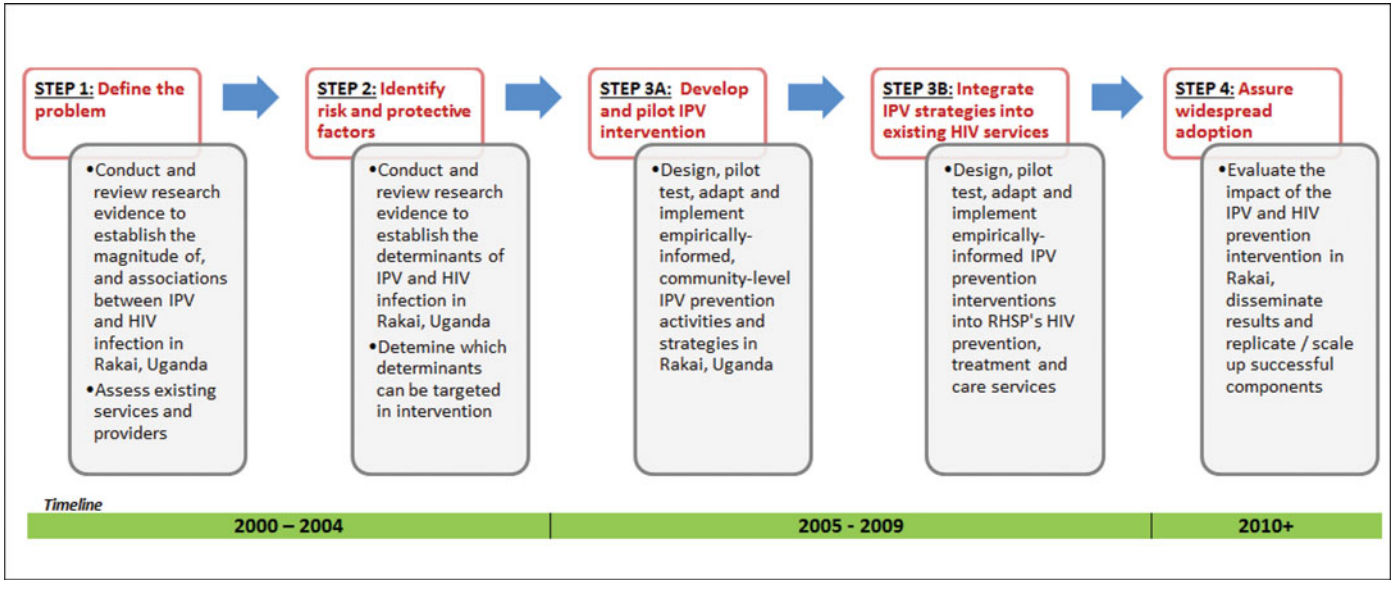

FIGURE 2 A public health approach to preventing HIV infection and IPV in Rakai, Uganda.

TABLE 1 Determinants of HIV and IPV in Rakai, Uganda

		Risk factors		Protective factors		
	Determinant	HIV	IPV	HIV	IPV	Reference(s)
Individual	Woman's younger age	x	x			Koenig et al., 2004a; Wawer et al., 1994
	Woman's higher education	x			x	Koenig et al., 2003, 2004a; Smith et al., 1999
	Forced first sex	x				Koenig et al., 2004b; Kouyoumdjian et al., 2013a
	Woman reports multiple sexual partners concurrently and in lifetime	x	x			Koenig et al., 2003, 2004a; Serwadda et al., 1992
	Woman reports early onset of sexual activity	x	x			Kelly et al., 2003; Koenig et al., 2003, 2004a
Relationship	Relationship type reported:	x	x	x	x	Koenig et al., 2003, 2004a; Nalugoda et al., 2014
	Being married/ cohabitating		x	x		
	Being in casual relationship				x	
	Woman's perception that her male partner is high HIV risk	x	x			Koenig et al., 2003, 2004a
	Low rates of HIV disclosure between both partners	x	x			Wagman et al., 2003
	Age gap between partners (i.e., male partner $\geq$ 10 years older)	x				Kelly et al., 2003
	Alcohol use before sex of both or one partner	x	x			Zablotska et al., 2006
Society	Belief that wife beating was acceptable in certain circumstances		x			Koenig et al., 2003

Koenig et al., 2004a), and 14% of women 15–19 years old experienced forced first sex (Koenig et al., 2004b). Attitudes condoning IPV were widespread. Most men and women believed a man was justified to beat his wife under certain circumstances (Koenig et al., 2003). Using an ecological approach we reviewed individual-, relationship-, and society-level risk and protective factors for HIV and IPV. Findings are summarized in Table 1.

TABLE 2 Intended Outcomes and Impact of RHSP/SHARE Intervention to Reduce HIV and IPV in Rakai

Intermediate outcomes	Long-term impact
Risky sex practices	1. Reduce physical IPV
1. Reduce the number of nonmarital sexual partners	2. Reduce sexual IPV
2. Reduce alcohol use with sex	3. Reduce HIV incidence
Self-protection	
3. Increase the rate of consistent condom use	
4. Increase the rate of HIV disclosure	
HIV prevention, testing, and treatment	
5. Raise awareness about the link between HIV and IPV	
6. Train HIV counselors to screen for, handle, and refer IPV cases	
7. Integrate IPV screening and prevention into RHSP's treatment	
Contextual variables	
8. Change attitudes about the acceptability of IPV	

Prior to SHARE's initiation in 2005 RHSP offered the following services: HIV testing, results notification and counseling; HIV prevention education and provision of modern contraceptives and symptom-based STI treatment; and HIV treatment and care. Because the magnitude of IPV in Rakai and its associations with HIV infection were not well understood before this time period, however, RHSP did not offer any services for individuals experiencing or perpetrating IPV.

INTERVENTION DESIGN AND IMPLEMENTATION (STEPS 3A AND 3B)

SHARE was designed between January and March 2005. In April 2005, five individuals (three women and two men) with tertiary education, training in HIV and psychosocial counseling, and fluency in English and Luganda languages were appointed to work as the core SHARE team within RHSP. We engaged 40 resident community volunteers (10 per region) to work as local ambassadors of the project. In April and May 2005, the SHARE staff members underwent 4 weeks of training on IPV awareness and prevention and provision of violence-related support (Wagman et al., 2012; Wagman et al., 2015). We rolled out intervention activities in June 2005, and they ran through December 2009. We designed SHARE to reduce physical and sexual IPV against women and HIV incidence in the population by addressing risk factors of each outcome. Table 2 outlines the intended intermediate outcomes and long-term impact of the intervention.

SHARE Intervention Components and Target Population

Based on the 2002 census data (Uganda Bureau of Statistics [UBOS], 2002) we estimated the 2005 population of Rakai to be approximately 500,000 people. The intervention was offered at the community level in four of the 11 RCCS regions, each of which had 2–8 communities and approximately 809 households, defined as a group of persons who sleep under one roof and eat from a common pot (Grabowski et al., 2014). Thus, people in up to 3236 Rakai households were exposed to SHARE activities. Below we have provided details about the three components of SHARE: (a) community-based mobilization to reduce IPV; (b) standard of care health and HIV services from RHSP; and (c) enhanced HIV education, prevention, counseling, and referral.

COMMUNITY-BASED MOBILIZATION TO REDUCE IPV

SHARE's community mobilization aimed to reduce physical and sexual IPV by changing social norms and attitudes about the acceptability of violence and has already been described (Wagman et al., 2012). Briefly, we adapted methodologies from *The Resource Guide for Mobilizing Communities to Prevent Domestic Violence*, referred to as "the Resource Guide" (Michau & Naker, 2003) and based SHARE's approach on the Transtheoretical Model (TTM) of Behavior Change (Prochaska & DiClemente, 1983; Prochaska & Velicer, 1997). The TTM's central construct is the Stages of Change, which theorizes that individuals change their behavior by progressing through a series of five distinct stages. We scaled up the Stages of Change Theory of individual behavior to the community level. SHARE's five phases (and the corresponding TTM stage) follow: (a) Community Assessment (precontemplation); (b) Raising Awareness (contemplation); (c) Building Networks (preparation for action); (d) Integrating Action (action); and (e) Consolidating Efforts (maintenance). We used five strategies to facilitate each stage of change process, including the following: Advocacy, Capacity Building, Community Activism, Learning Materials, and Special Events. For each strategy we used a continuum of activities to address risk factors at all levels of the ecological model, reach everyone in the population, and correspond to the community's appropriate stage of change. Table 3 indicates which activities were used per strategy and the target population and intended outcome of each.

STANDARD OF CARE HEALTH AND HIV SERVICES FROM RHSP

SHARE participants received RHSP's general medical services, and HIV prevention and treatment services, all of which were provided via 17 mobile clinics that traveled throughout the 11 study regions. *General medical care*

TABLE 3 The Activities, Target Population, and Intended Outcome of Each SHARE IPV Prevention Strategy

Strategy	Examples of activities	Target population	Intended outcome
Advocacy	Workplace dialogues, local group seminars, dialogues with opinion and local leaders.	Local and religious leaders, local organizations, and government, teachers, health care workers.	Increased awareness of IPV as a public health problem and the right of everyone to live without violence.
Capacity building	Staff development workshops, training of resource persons and volunteers, seminars, community-based workshops on IPV, human rights and women's rights.	Police, probation, and social welfare officers, health care providers, teachers, local and religious leaders, SHARE staff and volunteers, and RHSP counselors and staff.	A developed set of skills for recognizing and preventing IPV.
Community activism	Work with community volunteers and drama groups, booklet clubs, IPV prevention action groups, door-to-door awareness activities, films.	Women and men, youth, and children within the community.	Active participation in preventing IPV in the community.
Learning materials	Development and adaptation of booklets, brochures, posters, story cards, and other educational materials.	General public, community members, local organizations, health care providers, and social service officers.	Effective learning through the use of engaging, thought-provoking materials.
Special events	Local fairs, public marches and campaigns, poster exhibitions, seminars, and collaboration meetings.	Community members, leaders, the general public, and local institutions.	Shared ideas and values for the promotion of IPV reduction.

services included bed nets for malaria prevention, clean water containers, and hypochlorite for prevention of diarrhea. *HIV prevention services* included provision of free condoms, and exposure to HIV prevention education and prevention of mother-to-child HIV transmission. *HIV treatment services* included treatment for syndromic sexually transmitted infections, and HIV monitoring and treatment. People with HIV who accepted voluntary counseling and testing were referred to another RHSP provider in the mobile clinic or stationed at a fixed RHSP site for free CD4 cell count assessment and HIV care, including cotrimoxazole prophylaxis for opportunistic diseases and positive living education. HIV-infected individuals were started on standard first-line antiretroviral (ART) therapy, when they reached WHO stage IV disease or had a CD4 cell count of lower than 250 cells per μL. Individuals taking ART were monitored via CD4 cell counts and HIV viral loads (Wagman et al., 2015).

ENHANCED HIV EDUCATION, PREVENTION, COUNSELING, AND REFERRAL

Enhanced HIV Prevention Education to Address IPV

SHARE partnered with RHSP's Health Education and Community Mobilization (HECM) team to raise awareness in intervention regions about how IPV increases women's risk for HIV infection and how women with HIV/AIDS are more vulnerable to abuse. The HECM team worked closely with local leaders, community health volunteers, and RHSP's Community Advisory Board to educate the community about health and HIV and to mobilize residents to participate in RHSP's research and health/HIV services. Building on this infrastructure, SHARE trained the HECM team to incorporate messages about HIV and IPV prevention during community meetings, local theater, sporting events, and film shows and education materials.

Engaging Adolescents and Men in Combination HIV/IPV Prevention

Being an adolescent was associated with increased risk for both IPV (Koenig et al., 2004a) and HIV infection (Wawer et al., 1994) in Rakai. To focus on young men and women (15 and 19 years old) we used a training package from *Stepping Stones*, an HIV prevention program that employs participatory methods for improving communication skills and building gender-equitable intimate relationships (Welbourn, 1995). We established peer groups in each intervention region and implemented a 10-session learning program in schools and central locations (to reach out-of-school youth) on topics including sex and love, HIV and STIs, safer sex and condoms, gender equality, and the importance of mutually consensual sex (Wagman et al., 2012). We intended to achieve several outcomes with our targeted work with youth,

including increased knowledge about sexual health, increased awareness about the risks and the consequences related to sexual risk taking and IPV, and improved communication skills.

Recognizing that Uganda is culturally and socially patriarchal (Ellis, Manuel, & Blackden, 2006) and men were the main perpetrators of IPV in Rakai (Koenig et al., 2003), we engaged men in all aspects of the intervention except those designed for specific, other groups. We partnered with male role models from the community and engaged traditional male activists in SHARE's implementation. All male partners received training in understanding IPV and its link with HIV; women's rights; men's role in preventing IPV; and how men can advocate for nonviolence and HIV prevention (Wagman et al., 2012). We addressed the role of alcohol in increasing risk for both HIV and IPV and encouraged men to consider the benefits of reducing alcohol intake and talking more openly with their female partners about sex, relationships, and peaceful conflict resolution. The goals of our targeted work with men were to increase knowledge about how cultural mores about masculinity and female subordination impact attitudes and behaviors toward women.

Support Groups for HIV-Infected Women

We formed and facilitated support groups for women living with HIV. These sessions occurred biweekly and provided a supportive and nonjudgmental forum for discussing issues related to living with HIV or seeking care and treatment that could potentially incite a violent husband/partner to perpetrate or exacerbate abusive behavior. For instance, women shared stories and advice about how to safely introduce topics such as the importance of initiating and adhering to HIV treatment regimens (including ART). Sessions also provided a space for openly sharing ideas on how to care for HIV-infected infants and children, whether or not ART can be used during pregnancy and breastfeeding, and how to prevent mother-to-child transmission of HIV.

Training RHSP's HCT and ART Counselors to Screen for and Handle Cases of IPV

RHSP offered HCT to all RCCS participants who provided blood specimens at each survey visit. HIV results notification and post-test counseling services were provided by professional HIV counselors stationed at 18 community offices situated throughout the 11 regions (Matovu, Kigozi, Nalugoda, Wabwire-Mangen, & Gray, 2002). We partnered with a Ugandan violence prevention organization called Empower Children and Communities Against Abuse (ECCA) to conduct a 3-day training for all 18 HCT counselors and five ART counselors. ECCA provided systematic guidance on how to understand IPV, screen for and recognize signs and symptoms of abuse, and alleviate

IPV-related psychological trauma via one-to-one directional counseling, group support counseling, couple counseling, and referral.

Community Counseling Aides and Counseling Network

With 18 counseling offices (at the outset of SHARE) to serve all RCCS participants, each counselor handled approximately 533–622 clients per year. To help with this workload in the four SHARE regions, we appointed and trained 12 community counseling aides (CCAs); three per region (one male, one female, and one youth representative). The CCAs were trained to offer basic support to community members experiencing violence, including violence associated with seeking HIV services. They met with community members at a central location (where privacy could be ensured) organized by the SHARE staff in each region. The CCAs received a monthly stipend of 10,000 Ugandan shillings (~U.S.$6). SHARE's CCAs were also trained using the framework of the Community Activism Course (Michau & Naker, 2003).

The CCAs received clients directly or upon referral from a SHARE community volunteer. Clients requiring psychosocial support beyond the scope of a CCA's ability were referred to one of the RHSP professional counselors. Both RHSP counselors and SHARE CCAs (stationed in community offices and at central locations in each region) were trained to refer clients in need of legal aid to a local social welfare officer stationed at one of the parish-level government offices in Rakai. Regular meetings were held to bring representatives from these entities (RHSP counselors, SHARE CCAs and community volunteers, and social welfare offices) together so they could become familiar with one another, update contact information, exchange information, and trouble shoot IPV and HIV-related issues experienced during day-to-day work.

HCT-Based Screening and Brief Intervention for Safe HIV Disclosure and Risk Reduction

The RHSP HCT counselors provided RCCS participants their HIV test results (upon request) as individuals or couples, according to the participants' preference; people who chose not to have couple counseling were encouraged to notify their partner(s) of their results (Matovu et al., 2002). During post-test counseling sessions, RHSP counselors helped clients assess and plan how to reduce their risks for HIV infection, transmission, or both by using a checklist with priority issues, including abstinence, condom use, couple counseling, partner notification, HIV results interpretation, family planning, nutrition, proper and prompt medication, and mother-to-child HIV transmission (Matovu et al., 2002). Prior to SHARE, however, RHSP's checklist did not include recommendations for addressing IPV among female clients accessing HCT services.

In 2006 the WHO recommended that HCT programs implement strategies to address the way in which violence and fear of violence influence women's ability to safely disclose HIV results and seek and access HIV care and treatment (WHO, 2006). With the assistance of a scholar with expertise in international work on HIV and IPV, we followed these recommendations and developed and pilot tested two tools for addressing IPV in the context of HIV counseling, testing, and results disclosure. The first tool was used to assess clients' fear of violence and safety of HIV disclosure and to help develop safe disclosure plans. The second tool helped counselors provide risk reduction counseling to women at heightened vulnerability for IPV. SHARE staff members and all 18 RHSP's HCT counselors (male and female) participated in a 2-day training workshop focused on the use of these tools. We then conducted a focused training for six HCT counselors (one in each of the four SHARE regions and two at RHSP headquarters) on the use of each tool. Each counselor participated in a subsequent 2-week pilot study to test and adapt these tools (King et al., 2015). After the pilot we modified the tools for full use during the SHARE intervention. Below, we describe in brief the intervention procedure.

Screening and brief intervention for safe HIV disclosure. We trained counselors to administer the safe HIV disclosure screening and intervention to female clients who reported the following: (a) living with their partner for at least 6 months; (b) receiving their HIV results for the first time; and (c) who were HIV-infected or indicated that testing alone, regardless of their HIV result, might incite violence in their relationship. The tool was designed to guide counselors through the process of asking clients five screening questions (Is your partner aware you will be tested for HIV and will receive your results? If you told your partner you tested positive for HIV, do you think he would react supportively? Are you afraid of how your partner will react if you share your HIV test results with him? Has your partner ever physically hurt you? Do you think your partner may physically hurt you if you tell him you have tested for HIV and your HIV results are positive?) and, based on their responses and HIV-status, through a tailored plan for immediate, delayed, mediated, or nondisclosure (King, et al., 2015).

Screening and brief intervention for reduction of risk for violence and unsafe sex. We adapted guidelines from Family Health International (Fischer, Reynolds, Yacobson, Barnett, & Schueller, 2007) to train RHSP counselors to use role play scenarios with female clients to help facilitate discussion about negotiating condom use and preventing sexual coercion. We tailored role plays for use with younger women in relationships, women in casual relationships, and women who were married or in consensual unions. Counselors were trained to screen women for IPV and assess their level of comfort (and perceived ability) to negotiate condom use and when to have or not have sex with their partner. Counselors administered this tool to all female

clients who reported that their male partner/husband perpetrated IPV in the past year, who reported that their male partner/husband refused HCT, or both (King et al., 2015).

MONITORING AND EVALUATION

The SHARE staff, volunteers, and partners completed monitoring reports after each IPV and HIV prevention activity to record what took place, how long it lasted, who was involved, and what lessons were learned. The SHARE coordinator wrote intervention summaries at the end of each month and full reports at the end of each phase to describe the implementation experience and lessons learned and to assess acceptability of the intervention and the communities' readiness for future behavior and attitude change (Wagman et al., 2012). The six HCT counselors who implemented the safe disclosure and risk reduction tools filled out summary forms after each session of using either tool to record the time required to implement it, problems encountered, and lessons learned.

To map out how we intended for intervention strategies and activities to lead to desired outcomes and long-term impact and to plan for systematic evaluation, we developed the logic model shown in Figure 3. In the model we have included the intervention's *strategies* (both IPV and HIV); *target population and output* (the direct product of the program's activities); *outcomes* (the short-term or intermediate results), and *impact* (the long-term outcome of the program).

Simultaneous to the implementation of SHARE we conducted an evaluation study via RCCS to assess the intervention's impact. The evaluation was designed as a comparative study whereby the four SHARE regions made up the intervention arm and seven control group regions received only standard of care HIV services. Investigators for the RCCS did a baseline survey between 2005 and 2006 and enrolled 11,448 individuals aged 15–49 years (5,337 in the intervention arm and 6,111 in the control arm). Two follow-up surveys were conducted between 2006–2008 and 2008–2009. Exposure to SHARE was associated with significant reductions in women's reports of past year physical and sexual IPV, including forced sex, and HIV incidence in the total population, and increased disclosure of HIV results in both sexes (Wagman et al., 2015).

ETHICAL AND SAFETY PROCEDURES

All referenced RCCS surveys were done in private by same-sex interviewers trained by RHSP staff who were certified in research ethics and good clinical practice. All interviewers were trained using the WHO's guidelines for safe and ethical research on domestic violence, including IPV sensitiza-

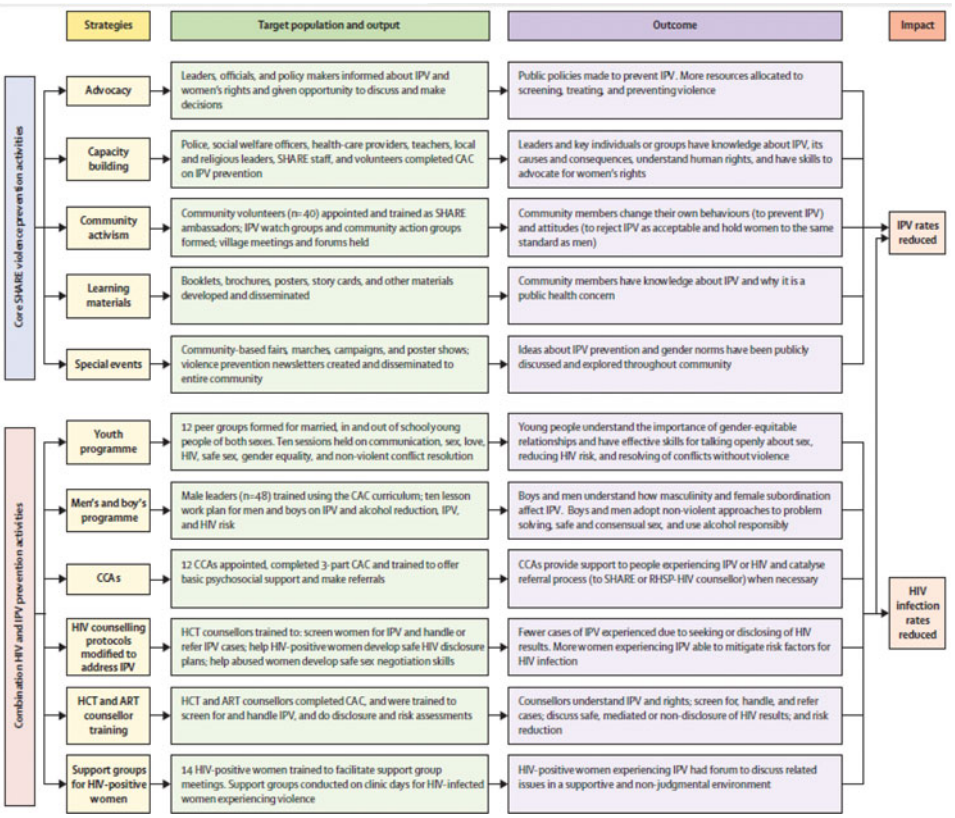

FIGURE 3 Logic model of the SHARE project. (Reprinted with permission from Wagman et al., 2005).

tion, and how to minimize distress related to research on IPV (WHO, 2001). All components of RCCS conducted to evaluate SHARE were approved by the Western Institutional Review Board (Olympia, WA, USA), the WHO's Ethics Review Committee, the Uganda Virus Research Institute's Science and Ethics Committee (UVRI-SEC), and the Ugandan National Council of Science and Technology (UNCST). All instruments for the HCT pilot study were approved by the UVRI-SEC, the UNCST, and the IRB at the University of North Carolina at Chapel Hill. All SHARE staff members and volunteers and RHSP counselors received additional training on the ethical protection of participants involved in IPV-related programming.

SUCCESSES, CHALLENGES, AND LESSONS LEARNED

As described previously (Wagman et al., 2012), a challenge we faced but had not planned for was realizing that many individuals involved with SHARE and RHSP were dealing with their own cases of abuse at home, HIV infection (of

themselves or family members), or both; but they were not receiving the care they needed. We responded by developing an internal staff support system whereby victims/perpetrators of IPV (and spouses/partners, as appropriate) were offered confidential counseling, risk reduction planning by a SHARE staff member or professional counselor/social worker, and help (as needed) in accessing HIV and other medical care.

Another challenge was that despite male-focused activities, many men perceived violence prevention to be a "women's project," and there was skepticism about any true links between IPV and HIV. We addressed these barriers in three main ways. First, our intervention team included both men and women so as to lead by exemplifying that preventing IPV and HIV infection required everyone's efforts. Second, we recruited local male leaders and volunteers to serve as role models for IPV prevention and make SHARE's efforts less threatening to men in the community. Third, we offered ongoing activities to raise awareness about links between IPV and HIV. We allowed everyone ample time and a safe space to ask questions and discuss fears about how preventing IPV might negatively impact men. Notwithstanding our efforts, far fewer men than women took part in SHARE activities, men's reports of IPV were substantially lower than women's, and SHARE did not significantly impact male perpetration of IPV over time (Wagman et al., 2015). Further work is needed to understand how to more effectively involve men in the prevention of VAW and improve measurements of their patterns of abusive behavior.

A success of the intervention was the involvement of the CCAs. These volunteers greatly complemented the work of the professional HCT counselors. Having CCAs located in close proximity to those exposed to the intervention in the SHARE regions provided a short-term mechanism of support for community members in need, reduced the workload of RHSP's counselors, and increased the sense of community ownership of the project. Nonetheless, some individuals were uncomfortable disclosing personal experiences of IPV or HIV-related issues to someone so familiar to them. Many feared their sensitive information would not remain confidential. We were unable to find a solution for this challenge but hope longer-running interventions might see improvement as trust in the CCAs grows among community members.

The tools for addressing violence in the HCT setting were useful, but we feel more work is needed to improve HIV clinic-based interventions for IPV. Those infected with HIV in RHSP were interviewed about their experiences using the disclosure assessment and risk reduction tools, and all reported that both were easy to implement and took minimal time (5–10 minutes each) to complete. Many counselors felt the HCT setting provided an ideal setting to address violence and by incorporating routine screening they thought most clients felt safe to disclose experiences or fears of abuse. The structured tools enabled the counselors to help clients develop personalized safety plans, but

TABLE 4 Recommendations for Future IPV and HIV Prevention Efforts

1. Awareness raising is needed to increase knowledge about the links between HIV and IPV.
2. On-site psychosocial support (or a strong referral system) should be integral to all violence reduction programs, whether they are standalone interventions or combined with other activities (such as HIV prevention work).
3. We suggest active partnership with groups and individuals in the community throughout the duration of intervention. Introduce them to the project, solicit their suggestions and endorsement, and take special care to ensure they are taken through their own process of behavior change.
4. If working to engage men in the prevention of IPV, have both men and women lead the project, involve men as volunteers and positive role models, and accommodate males who need longer (than females or other men) to progress through the stages of change.
5. If doing HCT work and funds and capacity allow, we recommend appointing community counseling aides to complement the work of the professional counselors.
6. Ideally the disclosure assessment and risk reduction tools should be pilot tested for 3–6 months or longer if funds and capacity allow. If role plays are used, we suggest counselors develop personalized content based on what a client feels is appropriate in his/her relationship.
7. Programmers should measure the longer-term effectiveness and sustainability of the disclosure assessment and risk reduction tools through formal evaluation and feedback sessions.
8. More research is needed to assess women's experiences of HCT-based IPV screening and brief interventions and explore how addressing gender power inequality in relationships influences HIV risk reduction.
9. Donors and international funding bodies should increase and protect funding for interventions and evaluation research focused on the prevention of violence against women.

most counselors felt more than one session were needed to adequately help some clients. Thus, we modified the protocol during full implementation and encouraged counselors to meet with clients multiple times, as needed. Many female clients said that while they believed the risk reduction scenarios were well crafted, they personally felt powerless to discuss condom use or consensual sex with their partner (King et al., 2015). Thus, counselors were trained to tailor the role-play content based on what each client thought would be appropriate and comfortable in her relationship. Another shortcoming of the HCT pilot was that it only lasted 2 weeks. The counselors felt rushed, and we needed to continue making small modifications to the protocol during the first few months of full implementation.

Further, while counselors provided feedback on their experiences with the HCT pilot test and we measured population-level rates of HIV testing, and receiving and disclosing HIV results through RCCS, we did not assess women's experiences of HCT-based IPV screening and brief interventions. We believe this type of research is needed to measure the acceptability and effectiveness of addressing violence in this setting. Corroborating what HCT counselors reported in our Rakai pilot, a study in South Africa found many

women who were screened for IPV in a voluntary counseling and testing setting felt incapable of discussing condom use, HIV testing, and other sexual risks with their male partners. The authors recommended shifting the focus from training counselors to ask about IPV and encouraging them to more broadly discuss gender power inequality in relationships (Christofides & Jewkes, 2010). We did not explore this approach in our counselor training and intervention and feel research is warranted to examine its role in HIV risk reduction in Rakai and similar settings.

One of the largest challenges of our intervention research was limited funding for both the implementation of SHARE and the evaluation of its impact. Because we were working on a very small budget, we were only able to conduct the intervention in four RCCS regions, precluding our ability to conduct a true randomized controlled trial (Wagman et al., 2015). This is a symptom of a larger problem, namely, a scarcity of funding for intervention research focused on VAW. To advance the field of joint programming for HIV and IPV, donor funds are greatly needed to replicate and rigorously evaluate interventions like SHARE (Jewkes, 2015; Mullan, 2014).

CONCLUSIONS AND RECOMMENDATIONS

In summary, SHARE was the first behavioral intervention to show significant decreases in both IPV and HIV incidence (Wagman et al., 2015). Thus, HIV programmers in other sub-Saharan African settings should consider adopting SHARE's approach, at least in part, as a standard of care in their work toward the prevention of IPV and HIV infection, and provision of related services. We previously provided the details of SHARE's IPV prevention activities (Wagman et al., 2012) and, in this article, we describe how they were woven into RHSP's existing HIV services. We conclude with a set of recommendations, based on our experiences and lessons learned, for future IPV and HIV prevention interventions (Table 4).

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